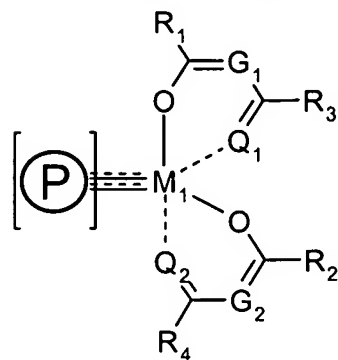


In the claims:

1. **(original)** An optical recording medium comprising a substrate, a recording layer and optionally one or more reflecting layers, wherein the recording layer comprises a compound of formula



(I) or a tautomeric or mesomeric form thereof,

wherein

G_1 and G_2 are each independently of the other $C(R_5)$ or N ;

M_1 is a lanthanide or transition metal of groups 4 to 10;

\square is a phthalocyanino diradical;

Q_1 and Q_2 are each independently of the other O or S,

R_1 and R_2 are each independently of the other C_1 - C_{12} alkyl, C_3 - C_{12} cycloalkyl, C_2 - C_{12} alkenyl or C_3 - C_{12} cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_6 , or C_6 - C_{10} aryl, C_1 - C_9 heteroaryl, C_7 - C_{12} aralkyl or C_2 - C_{12} heteroaralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_7 ;

R_3 and R_4 are each independently of the other hydrogen, hydroxy, $S-R_8$, $O-R_8$, $O-CO-R_8$, $OCOOR_8$, NH_2 , $NH-R_8$, NR_8R_9 , $NHCOOR_8$, NR_8COOR_{10} , $NHCOOR_8$, NR_8COOR_{10} , ureido, $NR_8-CO-NHR_{10}$, or C_1 - C_{12} alkyl, C_3 - C_{12} cycloalkyl, C_2 - C_{12} alkenyl or C_3 - C_{12} cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_6 , or C_6 - C_{10} aryl, C_1 - C_9 heteroaryl, C_7 - C_{12} aralkyl or C_2 - C_{12} heteroaralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_7 ;

each R_5 , independently of any other R_5 , is hydrogen, or C_1 - C_{12} alkyl, C_3 - C_{12} cycloalkyl, C_2 - C_{12} alkenyl or C_3 - C_{12} cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_6 , or C_6 - C_{10} aryl, C_1 - C_9 heteroaryl, C_7 - C_{12} aralkyl or C_2 - C_{12} heteroaralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_7 ;

wherein R_1 and R_2 , R_2 and R_3 , R_3 and R_4 or R_1 and R_4 can be linked by a bonding member, or two of R_1 , R_2 , R_3 and R_4 can each be linked by a bonding member to one of the two other R_1 , R_2 , R_3 and R_4 to form pairs, and each bonding member is a direct bond or a bridge O, S or N(R_8); or

R_1 forms with R_5 of G_1 and/or R_3 forms with R_5 of G_2 a saturated, mono- or poly-unsaturated or aromatic 5- or 6-membered ring which may optionally contain 1, 2 or 3 identical or different hetero atoms -O-, -S-, -N= or -N(R_8)-, which ring is unsubstituted or substituted by one or more, where applicable identical or different, radicals R_7 ; and/or

R_2 forms with R_5 of G_1 and/or R_4 forms with R_5 of G_2 a saturated or mono- or poly-unsaturated 5- or 6-membered ring which may optionally contain 1, 2 or 3 identical or different hetero atoms -O-, -S-, -N= or -N(R_8)-, which ring is unsubstituted or substituted by one or more, where applicable identical or different, radicals R_6 ;

R_6 is halogen, hydroxy, O- R_{11} , O-CO- R_{11} , oxo, S- R_{11} , thioxo, NH_2 , NH- R_{11} , $NR_{11}R_{12}$, NH_3^+ , $NH_2R_{11}^+$, $NHR_{11}R_{12}^+$, $NR_{11}R_{12}R_{13}^+$, NR_{11} -CO- R_{13} , NR_{11} COOR₁₃, cyano, formyl, COO- R_{11} , carboxy, carbamoyl, CONH- R_{11} , CONR₁₁ R_{12} , ureido, NH-CO-NHR₁₃, NR_{11} -CO-NHR₁₃, phosphato, P(=O) $R_{11}R_{13}$, POR₁₁OR₁₃, OPR₁₁R₁₃, OPR₁₁OR₁₃, P(=O) $R_{11}R_{13}$, P(=O)OR₁₁OR₁₃, OP(=O) $R_{11}R_{13}$, OP(=O)OR₁₁OR₁₃, OPO₃ R_{11} , SO₂ R_{11} , sulfato, sulfo, R_{14} , N=N- R_{14} , or C₁-C₈alkoxy or C₃-C₈cycloalkoxy each unsubstituted or mono- or poly-substituted by halogen;

R_7 , independently of any other R_7 , is R_{15} , halogen, nitro, cyano, thioccyano, hydroxy, S- R_8 , O- R_8 , O-CO- R_8 , OCOOR₈, NH_2 , NH- R_8 , NR_8R_9 , NHCOR₈, NR_8 COR₁₀, NHCOOR₈, NR_8 COOR₁₀, ureido, NR_8 -CO-NHR₁₀, NH_3^+ , $NH_2R_8^+$, $NHR_8R_9^+$, $NR_8R_9R_{10}^+$, N=N- R_{15} , N=CR₈ R_9 , N=CR₁₆ R_{17} , C(R_{18})=NR₈, C(R_{18})=NR₁₆, C(R_{18})=CR₁₆ R_{17} , CHO, CHOR₈OR₁₀, COR₉, CR₉OR₈OR₁₀, CONH₂, CONHR₈, CONR₈ R_9 , SO₂ R_8 , SO₃ R_8 , SO₂NH₂, SO₂NHR₈, SO₂NR₈ R_9 , COOH, COOR₈, B(OH)₂, B(OH)(OR₈), B(OR₈)OR₁₀, phosphato, P(=O) R_8R_{10} , POR₈OR₁₀, P(=O) R_8R_{10} , P(=O)OR₈OR₁₀, OPR₈ R_{10} , OPR₈OR₁₀, OP(=O) R_8R_{10} , OP(=O)OR₈OR₁₀, OPO₃ R_8 , sulfato, sulfo, or C₁-C₅alkyl, C₃-C₆cycloalkyl, C₁-C₅alkylthio, C₃-C₆cycloalkylthio, C₁-C₅alkoxy or C₃-C₆cycloalkoxy each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_6 ;

R_8 , R_9 and R_{10} are each independently of the others R_{15} , R_{19} -[O-C₁-C₄alkylene]_m, R_{19} -[NH-C₁-C₄alkylene]_m, or C₁-C₈alkyl, C₃-C₈cycloalkyl, C₂-C₈alkenyl or C₃-C₈cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C₁-C₅alkoxy or C₃-C₆cycloalkoxy radicals; or

R₈ and R₉ together with the common nitrogen are pyrrolidine, piperidine, piperazine or morpholine, each of which is unsubstituted or mono- to tetra-substituted by C₁-C₄alkyl; or

R₈ and R₁₀ together are C₂-C₈alkylene, C₃-C₈cycloalkylene, C₂-C₈alkenylene or C₃-C₈cycloalkenylene, each of which is unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C₁-C₅alkoxy or C₃-C₆cycloalkoxy radicals;

R₁₁, R₁₂ and R₁₃ are each independently of the others C₁-C₈alkyl, C₃-C₈cycloalkyl, C₂-C₈alkenyl, C₃-C₈cycloalkenyl, R₁₉-[O-C₁-C₄alkylene]_m, R₁₉-[NH-C₁-C₄alkylene]_m, C₆-C₁₀aryl, C₄-C₉heteroaryl, C₇-C₁₀aralkyl or C₅-C₉heteroaralkyl; or

R₁₁ and R₁₂ together with the common nitrogen are pyrrolidine, piperidine, piperazine or morpholine, each of which is unsubstituted or mono- to tetra-substituted by C₁-C₄alkyl;

R₁₄ is C₆-C₁₂aryl, C₄-C₁₂heteroaryl, C₇-C₁₂aralkyl or C₅-C₁₂heteroaralkyl, each of which is unsubstituted or substituted by one or more, where applicable identical or different, radicals R₇;

R₁₅ is phenyl, C₄-C₅heteroaryl, C₇-C₈aralkyl or C₅-C₇heteroaralkyl, each of which is unsubstituted or substituted by one or more, where applicable identical or different, radicals R₂₀;

R₁₆ and R₁₇ are each independently of the other NR₁₁R₁₂, CN, CONH₂, CONHR₈, CONR₈R₉ or COOR₉;

R₁₈ is R₁₅, hydrogen, cyano, hydroxy, C₁-C₁₂alkoxy, C₃-C₁₂cycloalkoxy, C₁-C₁₂alkylthio, C₃-C₁₂cycloalkylthio, amino, NHR₁₃, NR₁₁R₁₂, halogen, nitro, formyl, COO-R₁₁, carboxy, carbamoyl, CONH-R₁₁, CONR₁₁R₁₂, or C₁-C₈alkyl, C₃-C₈cycloalkyl, C₂-C₈alkenyl or C₃-C₈cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C₁-C₅alkoxy or C₃-C₆cycloalkoxy radicals; or

R₈ and R₁₈ together are C₂-C₈alkylene, C₃-C₈cycloalkylene, C₂-C₈alkenylene or C₃-C₈cycloalkenylene, each of which is unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C₁-C₅alkoxy or C₃-C₆cycloalkoxy radicals;

R₁₉ is hydrogen, C₁-C₄alkyl or C₁-C₃alkylcarbonyl;

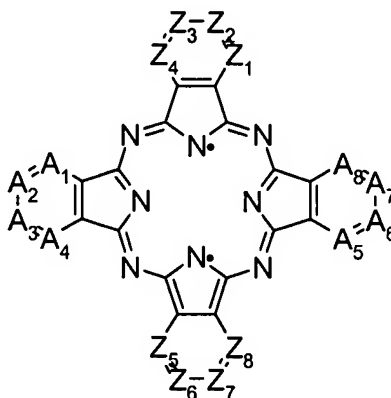
R_{20} is nitro, SO_2NHR_{11} , $SO_2NR_{11}R_{12}$, or C_1 - C_8 alkyl, C_3 - C_8 cycloalkyl, C_1 - C_8 alkylthio, C_3 - C_8 cycloalkylthio, C_1 - C_8 alkoxy or C_3 - C_8 cycloalkoxy each unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C_1 - C_5 alkoxy or C_3 - C_6 cycloalkoxy radicals;

and

m is a number from 1 to 4.

2. **(previously presented)** An optical recording medium according to claim 1, wherein G_1 and G_2 are each independently of the other $C(R_5)$;

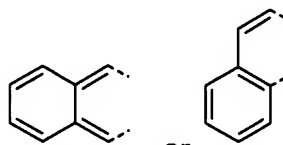
M_1 is a lanthanide or transition metal of groups 4 to 7;



□ is a phthalocyanino diradical of formula

, wherein A_1 to A_8 and Z_1 to

Z_8 are all independently of one another N or CR_{24} , and each R_{24} independently of the other R_{24} is H or



R_7 ; or two adjacent R_{24} together are 1,4-buta-1,3-dienylene,

or

, each of which is

unsubstituted or substituted by one or more, where applicable identical or different, radicals R_7 and wherein 1 or 2 carbon(s) may have been replaced by nitrogen; and

Q_1 and Q_2 are O;

R_3 and R_4 are each independently of the other hydrogen, hydroxy, $S-R_8$, $O-R_8$, NH_2 , $NH-R_8$, NR_8R_9 , C_1 - C_8 alkyl, C_3 - C_8 cycloalkyl, C_2 - C_8 alkenyl or C_3 - C_8 cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_6 ; or C_6 - C_{10} aryl or C_1 - C_9 heteroaryl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_7 ;

R_5 is hydrogen or forms a 5- or 6-membered ring with R_1 or R_2 ;

R_6 is halogen, hydroxy, $O-R_{11}$, $O-CO-R_{11}$, oxo, NH_2 , $NH-R_{11}$, $NR_{11}R_{12}$, or C_1-C_4 alkoxy unsubstituted or mono- or poly-substituted by halogen;

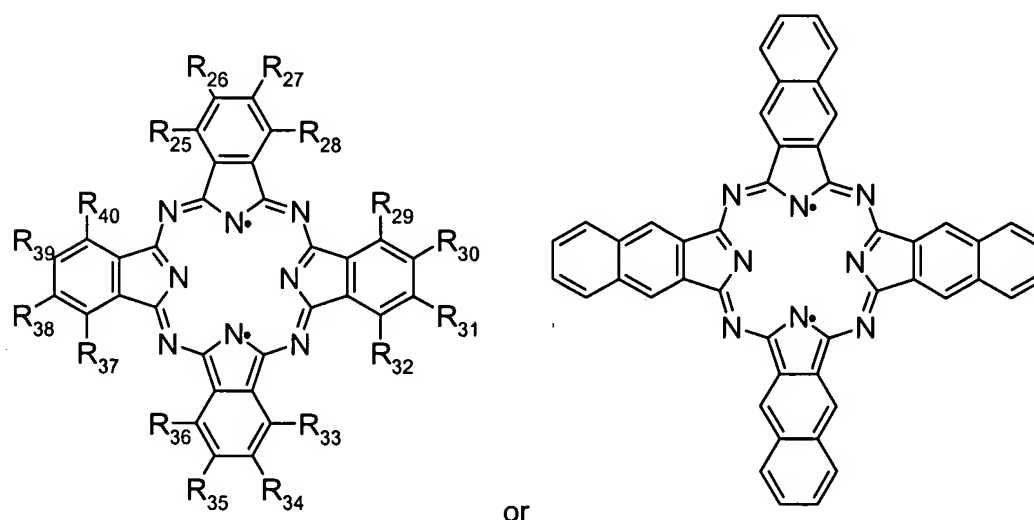
and

R_7 is halogen, nitro, cyano, thiocyno, $S-R_8$, $O-R_8$, NH_2 , $NH-R_8$, NR_8R_9 , $NHCOR_8$, $N=CR_8R_9$, $N=CR_{16}R_{17}$, CHO , $CHOR_8OR_{10}$, COR_9 , $CONR_8R_9$, SO_2R_8 , $COOR_8$, or C_1-C_5 alkyl or C_1-C_5 alkoxy each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_8 .

3. (previously presented) An optical recording medium according to claim 1, wherein G_1 and G_2 are each independently of the other $C(R_5)$;

M_1 is Ti, Zr or Hf;

\square is a phthalocyanino diradical of formula



wherein R_{25} to R_{40} are all independently of one another H, halogen, $O-R_8$, $S-R_8$, $O-CO-R_8$, $NH-R_8$, NR_8R_9 , CH_2OR_{11} , $CH_2NR_{11}R_{12}$, $C(R_{18})=CR_{16}R_{17}$, CHO , $CHOR_8OR_{10}$, $C(R_{18})=NR_8$, COR_9 , $CR_9OR_8OR_{10}$, CN , $COOH$, $COOR_8$, $CONH_2$, $CONHR_8$, $CONR_8R_9$, SO_2R_8 , SO_2NH_2 , SO_2NHR_8 , $SO_2NR_8R_9$, SO_3R_8 , $SiR_8R_9R_{10}$, POR_8OR_{10} , $P(=O)R_8R_{10}$, $P(=O)R_8OR_{10}$, $P(=O)OR_8OR_{10}$, $P(=O)(NH_2)_2$, $P(=O)(NHR_8)_2$, $P(=O)(NR_8R_9)_2$, OPR_8R_{10} , OPR_8OR_{10} , $OP(=O)R_8OR_{10}$, $OP(=O)OR_8OR_{10}$ or OPO_3R_8 , more especially H, halogen, $O-R_8$, $O-CO-R_8$, $NH-R_8$, NR_8R_9 , CH_2OR_{11} or $CH_2NR_{11}R_{12}$; and also

Q_1 and Q_2 are O;

R_1 and R_2 are each independently of the other C_1-C_5 alkyl or C_2-C_5 alkenyl, each of which is unsubstituted or substituted by one or more, where applicable identical or different, radicals R_6 , or phenyl or C_2-C_5 heteroaryl, each of which is unsubstituted or substituted by one or more, where applicable identical or different, radicals R_7 ;

R₃ and R₄ are each independently of the other hydrogen, hydroxy, S-R₈, O-R₈, NH₂, NH-R₈, NR₈R₉, or C₁-C₅alkyl or C₂-C₅alkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R₆, or phenyl unsubstituted or substituted by one or more, where applicable identical or different, radicals R₇;

R₅ is hydrogen or forms a 5- or 6-membered ring with R₁ or R₂;

R₆ is halogen, hydroxy, O-R₁₁, oxo, NH₂, NH-R₁₁ or NR₁₁R₁₂;

and

R₇ is halogen, nitro, cyano, O-R₈, NH-R₈, NR₈R₉, CHO, CHOR₈OR₁₀, COR₉, CONR₈R₉, SO₂R₈, COOR₈, or C₁-C₅alkyl or C₁-C₅alkoxy each unsubstituted or substituted by one or more, where applicable identical or different, radicals R₆.

4. **(previously presented)** An optical recording medium according to claim 1, wherein the compound of formula (I) contains branched C₃-C₁₂alkyl or branched C₃-C₁₂alkenyl.

5. **(previously presented)** An optical recording medium according to claim 1, wherein the recording layer is substantially amorphous.

6. **(previously presented)** An optical recording medium according to claim 1, additionally comprising a covering layer, wherein substrate, reflector layer, recording layer and covering layer are arranged in that order.

7. **(previously presented)** An optical recording medium according to claim 1, which in addition to comprising a compound of formula (I) comprises a metal-free chromophore.

8. **(previously presented)** An optical recording medium according to claim 1, wherein the compound of formula (I) is substantially amorphous.

9. **(previously presented)** A method of producing an optical recording medium according to claim 1, wherein a solution of a compound of formula (I) according to claim 1 is applied by spin-coating to a grooved substrate.

10. **(previously presented)** A method of recording or playing back data, wherein the data on an optical recording medium according to claim 1, are recorded or played back at a wavelength of from 350 to 500 nm.
11. **(previously presented)** An optical recording medium according to claim 2, wherein M_1 is Ti, Zr or Hf.
12. **(previously presented)** An optical recording medium according to claim 11, wherein M_1 is Zr.
13. **(cancelled)**
14. **(currently amended)** An optical recording medium according to claim ~~[[13]]~~ 3, wherein M_1 is Zr.